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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,249	08/03/2001	James E. Boyce	SC-00-08	9132

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ROBERT GROOVER III
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EXAMINER

NEUDER, WILLIAM P

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 12/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/923,249

Applicant(s)

BOYCE, JAMES E.

Examiner

William P Neuder

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-5 and 11-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Election/Restrictions

This application contains claims 1-5 and 11-20 drawn to an invention nonelected with traverse in Paper No. 10. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waldenstrom et al'738 in view of Krall et al.

Waldenstrom discloses a drilling tool having a first end adapted to be connected to a drill string (see fig. 2). Inserts 1 are inserted into the drilling tool such that a working end extends from the tool. A carbide body has an outer ultra hard layer (see fig. 5, col. 6, lines 20-23). As to claims 7 and 8, the carbide has a binder content less than 11 %

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(see col. 6, lines 20-23). As to claim 9, the insert is hemispherical (see fig. 5). As to claim 10, the ultra-hard material is bare diamonds (see col. 5, lines 43-45).

Waldenstrom is considered to disclose all of the claimed features except for the ultra hard layer being attached to the carbide component without the use of an adherent or transition layer. Krall et al discloses attaching a surface layer of ultra hard wear resistant material to a carbide stud without the use of adherent or a transition layer. It would have been considered obvious to attach the bare diamond layer of Waldenstrom to the carbide layer without the use of adherent or a transition layer as taught by Krall et al in view of Krall's teaching that the problems of surface layer adhesion is avoided (see col. 6, lines 42-44).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Krall et al.

Krall et al discloses an insert that can be used in cutting tools. It would be inherent that the insert when used in a cutting tool would have a bit attached to a drill string and the insert mounted in the bit to provide a second cutting end. The insert is formed from a first carbide body 1 having a layer 2 of ultra hard material bonded thereon. The layer 2 is bonded to the body 1 without the use of an adherent layer or a

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transitional layer. As to claims 7 and 8, the binder is present at 4.9 % that is less than 11 %. As to claim 9, the insert is hemispherical.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Krall et al in view of Waldenstrom et al '738.

Krall is considered to disclose all of the claimed features except for the ultra hard material being bare diamonds. Waldenstrom teaches that it is known to form an insert having an ultra hard layer of bare diamonds. It would have been considered obvious to replace the ultra hard layer of Krall with bare diamonds as taught by Waldenstrom since diamonds are one of the hardest materials available.

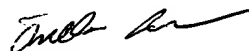
Response to Arguments

Applicant's arguments with respect to claims 6-10 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P Neuder whose telephone number is 703-308-2150. The examiner can normally be reached on Tuesday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J Bagnell can be reached on 703-308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9327.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.



William P Neuder

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A handwritten signature in black ink, appearing to read "P. H. S.", is written above the printed name of the Primary Examiner.

Primary Examiner
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W.P.N.